



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,328	08/17/2005	Teruo Komori	263370US90PCT	8645
22850	7590	07/24/2008	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			DUONG, THANH P	
ART UNIT	PAPER NUMBER			
	1797			
NOTIFICATION DATE	DELIVERY MODE			
07/24/2008	ELECTRONIC			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/516,328	Applicant(s) KOMORI ET AL.
	Examiner TOM P. DUONG	Art Unit 1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 6) <input type="checkbox"/> Other: _____ |
- Paper No(s)/Mail Date *See Continuation Sheet*

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date
:3/8/05;4/13/05;5/16/05;4/19/06;4/14/08.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitcher, Jr. (4,417, 908) in view of EP 1184066 (hereinafter EP '066).

Regarding claims 1 and 3, Pitcher, Jr. discloses a columnar honeycomb structural body (Fig. 17) comprising a large number of through holes (228) placed in parallel with one another in a length direction with a wall portion interposed therebetween, wherein: each of said through holes has one of ends sealed (Col. 9, lines 5-68); one end face of the through hole differs in opening area from the other end face thereof (228,229); a ceramic material (Col. 7, lines 39-60) which constitutes said wall portion has an average pore diameter in a range from 5 to 30 μm (Col. 4, lines 29-37).

Pitcher, Jr. discloses the pore size can be varied (Col. 3, lines 55-64) but is silent with respect to the rate of capacity of micro pores each having a pore diameter two or more times larger than said average pore diameter is set to 30% or less of the capacity of the entire micro pores.

EP '066 teaches that it is conventional to provide micro pores having a pore diameter two or more times larger (pores diameter of 10 μm or more is 20% less than) than the average pore diameter (3-7 μm). Such configuration provides a honeycomb

Art Unit: 1797

filters with superior in trapping efficiency for fine solid particulates with minimum pressure loss.

Thus, it would have been obvious in view of EP '066 to one having ordinary skill in the art to modify the device of Pitcher, Jr. with the micro pore ratio as taught by EP '066 in order to gain the above benefits.

Regarding claim 4, Pitcher, Jr. discloses the ceramic material which constitutes said partition wall has a porosity in a range from 30 to 70% (Col. 3, lines 55-58).

Regarding claim 5, Pitcher, Jr. discloses the through hole on a cross-section perpendicular to the length direction has a density in a range from 15.5 to 62.0 pcs/cm² (Col. 11, lines 26-32).

Regarding claim 6, Pitcher, Jr. discloses is silent with respect to the use of a silicon carbide.

EP '066 teaches the use of a silicon carbide as the material construction for a honeycomb structure. Such material provides a honeycomb structure with superior in heat resistance (section 0015).

Thus, it would have been obvious in view of EP '066 to one having ordinary skill in the art to select the silicone carbide material as taught by EP '066 in the honeycomb structure of Pitcher, Jr. in order to provide a honeycomb structure with superior in heat resistance.

Note, the use of a silicon carbide material as the material of construction for a honeycomb structure is well-known in the art and is commercially available.

Regarding claim 7, Pitcher, Jr. discloses the wall portion has a thickness in a range from 0.1 to 0.5 mm (Col. 11, lines 32-37).

Regarding claim 8, Pitcher, Jr. discloses the honeycomb structure is used to purify the exhaust gas from a vehicle (Col. 10, lines 16-20).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOM P. DUONG whose telephone number is (571)272-2794. The examiner can normally be reached on 8:00AM - 4:30PM (IFP).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Calderola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tom P Duong/
Patent Examiner, Art Unit 1797

Application/Control Number: 10/516,328

Art Unit: 1797

Page 5